


Safety Barrier Technical Conditions for Use

ZONEGUARD MDS Steel Safety Barrier - Temporary

	Issue Date: 1 December 2022	Proponent: Hill & Smith Pty Ltd
	<p>These conditions take precedence over any instructions in the Product Manual.</p> <p>This document is a summary of the Austroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies.</p> <p>The Austroads Safety Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.</p> <p>These acceptance conditions should be read in conjunction with the Product Manual and Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers.</p> <p>Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.</p>	

Status	Accepted – may be used on the classified road network
Product accepted	ZONEGUARD MDS Steel Safety Barrier – Temporary <u>Variant/s</u> Variants that are NOT listed above are NOT recommended for acceptance.
Accepted impact speed	100 km/h
Product manual reviewed	
Product manual	Zone Guard - HS Roads

Design Requirements

Containment Level	Point of Redirection		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading (m)	Trailing (m)					
NCHRP 350 TL3 update (Concrete Installation)	Interface between barrier and end treatment		95	10.2	0.13	0.83	
MASH TL3 (Asphalt Installation)	Interface between barrier and end treatment		95	6.0	0.10	0.80	

Approved Connections

An accepted end treatment must be provided at both ends of all barrier installations	
Public Domain Products	
W-Beam Guardrail	Not Permitted
Thrie-Beam Guardrail	Not Permitted
Concrete	Not Permitted

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Proprietary Products	
Universal Tau-M Crash Cushion	<ul style="list-style-type: none"> • Permitted for use in unidirectional applications only. Not permitted as a departure terminal. • Refer Universal Tau-M Crash Cushion Technical Conditions for Use. • The Zoneguard to Universal Tau-M Crash Cushion transition must be used to connect the crash cushion to the barrier.
QUADGUARD M10 CZ Crash Cushion	<ul style="list-style-type: none"> • Permitted for use in unidirectional applications only. Not permitted as a departure terminal. • Refer to QUADGUARD M10 Crash Cushion Technical Conditions for Use. • The QUAD-BEAM transition to end terminal must be used to connect the crash cushion to the barrier.
ABSORB-M Crash Cushion	<ul style="list-style-type: none"> • The installation is restricted to an impact speed of 80 km/h or less. • Refer to Absorb-M Crash Cushion Technical Conditions for Use. • The Zoneguard MDS to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. • This is a gating device.
LEGACY: UNIVERSAL TAU-II Crash Cushion	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • Refer to Universal Tau-II Crash Cushion Technical Conditions for Use. • The Zoneguard to Universal Tau-II Crash Cushion transition must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
LEGACY: QUADGUARD CZ Crash Cushion	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • Refer to QUADGUARD CZ Crash Cushion Technical Conditions for Use. • The Zoneguard to Quadguard CZ Crash Cushion transition must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
LEGACY: ABSORB 350 Plastic Terminal	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • The installation is restricted to an impact speed of 70 km/h or less. • Refer to ABSORB 350 Terminal Technical Conditions for Use. • The Zoneguard to AB350 Terminal transition must be used to connect the terminal to the barrier. • This is a gating device.

Design Guidance

Minimum installation length	95 metres between crash cushions/terminals (tested article)
System width (m)	0.7
Minimum distance to excavation (m)	0.45 - concrete installation - measured from the outer edge of the foot on the works side 0.75 - asphalt installation - measured from the outer edge of the foot on the works side
Slope limit	7%
Systems conditions	<ol style="list-style-type: none"> 1. Installation on top of a kerb is not recommended, however if installed on top of a kerb all system components must be free to operate. 2. All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable.
Gore area use	Permitted
Pedestrian area use	Permitted
Cycleway use	Permitted
Frequent impact likely	Permitted
Remote location	Permitted
Median use	Permitted

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Foundation Pavement Conditions					
Pavement	Use	Max Accepted Impact Speed (km/h)	Post/Pin Spacing (m)	Post/Pin Type	Pavement construction
Concrete	Permitted	100	10.2	M30 x 300mm threaded rod with epoxy	Min 150mm concrete pavement
Deep lift asphaltic concrete	Permitted	80	6.0	M30 x 500mm asphalt pin	Wearing Course - 45mm AC14 Base Course - 150mm AC20 Sub-Base - 260mm heavily bound
Asphaltic concrete over granular pavement	Not Permitted				
Flush seal over granular pavement					
Unsealed compacted formation					

Note: *Installation in pavement conditions not permitted above have not been justified to the Panel's satisfaction.*